UNIT 1 BENCHMARK

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| **UNIT ASSESSMENT ALIGNMENT GUIDE** | | | | | |
| **Learning Goal #** | **Learning Goal** | **Aligned Item #’s** | **Points Correct** | **Points Possible** | **Grade**  (%) |
| **CFU 2.1** | **Recognize and use like terms to simplify expressions.** | **1, 4, 7** |  | **3** |  |
| **SPI 1.3** | **Apply properties to evaluate expressions, simplify expressions, and justify solutions to problems.** | **2, 8, 11, 14, 18, 21, 24** |  | **7** |  |
| **CFU 1.9** | **Identify and use properties of the real numbers (including commutative, associative, distributive, inverse, identity element, closure, reflexive, symmetric, transitive, operation properties of equality).** | **5, 9, 17, 22** |  | **4** |  |
| **CFU 2.8** | **Use multiple strategies to approximate the value of an irrational number including irrational square roots and including location on the real number line.** | **3, 10, 15, 16** |  | **4** |  |
| **SPI 2.3** | **Describe and/or order a given set of real numbers including both rational and irrational numbers.** | **6, 12, 20, 23** |  | **4** |  |
| **CFU 3.3** | **Justify correct results of algebraic procedures using extension of properties of real numbers to algebraic expressions** | **13, 19, 25** |  | **3** |  |
| ***TOTAL:*** | | |  | **25** |  |

1) Which of the following terms are like terms:

7x, 9xy, 8x2, -8xy, 10x3, xy, 8y, 6x

A) 7x, 8x2, 6x

B) 9xy, 8x2, -8xy

C) 9xy, -8xy, xy

D) 7x, 8x2, 10x3

2) *Simplify:* 4(x – y)

A) 4x – 4y

B) 4x + 4y

C) 4x – y

D) 4x + y

3) Which point best represents - ?

A B C D

-5 -4 -3 -2 -1 0

A) point *A*

B) point *B*

C) point *C*

D) point *D*

4) *Simplify:* 7m + 10n – 9m – 20n + 14

A) 16m + 30n + 14

B) 2m – 10n + 14

C) -2m + 10n + 14

D) none of these

5) The following is an example of which property?

(x2y + 4) + 0 = x2y + 4

A) Associative

B) Identity

C) Commutative

D) Distributive

6) Which is an irrational number?

A)

B) -0.4546735…

C) 2π

D) all of these

7) *Simplify:* -5x2 + 6x – 10 – 11x + 3x2 + 4

A) -2x2 + 5x + 14

B) 8x2 – 5x + 14

C) -2x2 – 5x – 6

D) 8x2 – 5x – 6

8) *Simplify:*  -5(4a + 7)

A) -20a + 35

B) 20a + 35

C) -20a – 35

D) 20a – 35

9) The following is an example of which property?

(7 + 8) + 9 = 7 + (8 + 9)

A) Associative

B) Identity

C) Commutative

D) Distributive

10) Which is true?

A) 4/9 = 0.4

B) π/5 < 2

C) - > 1

D) 2.51 <

11) *Simplify:*  (b – 7)3

A) 3b + 21

B) 3b – 7

C) b – 21

D) 3b – 21

12) Which shows the numbers ordered from least to greatest?

A) π/3, 8/9, , 1.75

B) 8/9, π/3, 1.75,

C) , π/3, 8/9, 1.75

D) π/3, 8/9, 1.75,

13) What is the value of the expression when x = -5 and y = 3

5x3 + 4

-2y

A) 103.5

B) -103.5

C) -631

D) 631

14) *Simplify:* 7m + 4(m – 10)

A) 11m – 10

B) 7m + 4m – 40

C) 11m – 40

D) 11m + 40

15) Which of the following best describes the location of -on the number line?

A B C D

-5 -4 -3 -2 -1 0

A) between point *A* and point *B*

B) between point *B* and point *C*

C) between point *C* and point *D*

D) to the right of point *D*

16) Which number below is the least?

A) -

B) -1/4

C) -

D) 0

17) Which property of real numbers justifies the following statement?

*5m(2n + 6) – 4n is equivalent to 5m(2n) + 5m(6) – 4n*

A) The associative property of addition

B) Multiplicative identity property

C) The commutative property of multiplication

D) The distributive property of multiplication

18) *Simplify:* 6a2 – 2ab + a 2 + a(b + 8)

A) 5a2 + 3ab + 8

B) 6a2 – ab + 8a

C) 7a2 – ab + 8a

D) 7a2 – 3ab + 8a

19) What is the value of the expression when a = -2 and c = -5

+ ac3

A) -52

B) 250.4

C) -49.6

D) -7

20) Which shows the numbers ordered from greatest to least?

A) 45/8, 4.8, 41/3,

B) , 45/8, 4.8, 41/3

C) 45/8, , 4.8, 41/3

D) 4.8, 45/8, 41/3,

21) *Simplify:* 7 – 3(y – 5x) + 8y

A) 15x + 5y + 7

B) 3x + 11y + 7

C) -15x + 5y + 7

D) -27x + 11y + 7

22) Mrs. Johnson wants to buy a coat that costs $45 before a 25% discount. She

knows that she can find the cost after the discount, in dollars, by evaluating

the expression 45 – 45(0.25). She thinks that she can calculate the same cost

by evaluating 45(1 – 0.25). What property did Mrs. Johnson use to justify

that these two expressions represent the same cost after the discount?

A) Associative Property

B) Commutative Property

C) Distributive Property

D) Subtraction Property of Equality

23) Which is correctly ordered from least to greatest?

A) -11/5 , -π, -2.98, -

B) -π, -2.98, -, -11/5

C) -11/5 , -, -2.98, -π

D) -π, -2.98, -11/5, -

24) *Simplify:* 7p – 4(r – 5p) – 15

A) 27p + 8r + 3

B) 20p + 16r + 3

C) -13p + 16r – 33

D) 27p – 4r – 15

25) What is the value of the expression when m = 9 and n = 1/3?

2

+

A) 30

B) 54

C) 246

D) 270

26-30) Choose a learning goal/standard from the front page and write how you would explain to a new student how to solve each problem. Don’t forget each step! (If you need more room, use a separate piece of paper.) Then create your own problem.

Standard: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Problem#: \_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_My new problem:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

31-35) Choose a different learning goal/standard from the front page and write how you would explain to a new student how to solve each problem. Don’t forget each step! (If you need more room, use a separate piece of paper.) Then create your own problem.

Standard: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Problem#: \_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

My New Problem:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

KEY:

1. C
2. A
3. C
4. C
5. B
6. D
7. C
8. C
9. A
10. B
11. D
12. B
13. A
14. C
15. C
16. A
17. D
18. C
19. B
20. D
21. A
22. C
23. B
24. D
25. D
26. -35 graded by teacher